

Amendments to the Claims:

1. (currently amended) A communication system ~~(200)~~ comprising a system management function ~~(236)~~ for managing base-site resources and system throughput of data, the system management function configured to identify a number of resources, wherein the system management function ~~is characterised by~~ comprises:

a throughput identification function to identify one or more bottleneck resources from a sub-set of system resources involved in the system throughput; and

means for applying selectively at least one quality of service process selected from the group of scheduling and admission control, to the identified one or more bottleneck resources, based on the identification of the bottleneck resource.

2. (canceled).

3. (canceled).

4. (currently amended) The communication system ~~(200)~~ according to ~~any preceding~~ Claim 1, wherein the bottleneck resource is identified as a bottleneck resource using at least one of the following parameters:

(i) A frequency at which an overload control function is initiated for the resource; or and

(ii) Measurement of a resource's utilisation.

5. (currently amended) The communication system ~~(200)~~ according to ~~any of preceding Claims 2 to 4~~ 1 ~~when dependent upon Claim 2,~~ wherein at least one of the bottleneck resource, and preferably other resources from the sub-set of system resources, ~~is/are~~ prioritised by the system management function ~~(236)~~, with the bottleneck resource being allocated a high priority when selectively applying at least one ~~or more~~ quality of service processes.

6. (currently amended) The communication system ~~(200)~~ according to ~~any of preceding Claims 3 to 5~~ 1 ~~when dependent upon Claim 3,~~ wherein said system management function ~~(236)~~ is operably coupled to a scheduler for scheduling data packets for transmission, such that the data packets are added to, or removed from a data stream for transmission based on an availability capacity of the identified bottleneck resource or other resource from the sub-set of resources.

7. (currently amended) The communication system ~~(200)~~ according to ~~any of preceding Claims 3 to 5~~ 1 ~~when dependent upon Claim 3,~~ wherein the system management function ~~(236)~~ is operably coupled to an admission control function for admitting call requests to the communication system ~~(200)~~ such that the admission control function employs a tracking process to count a failure rate of admission attempts for a particular resource.

8. (currently amended) The communication system ~~(200)~~ according to Claim 7, wherein the bottleneck resource is identified based on said failure rate count.

9. (currently amended) The communication system ~~(200)~~ according to ~~any of the preceding~~ Claims 1, wherein the system management function ~~(236)~~ only applies one or more quality of service processes to the identified one or more bottleneck resources.

10. (currently amended) The communication system ~~(200)~~ according to ~~any of the preceding~~ Claims 1, wherein the throughput identification function identifies a bottleneck resource by detection of an alarm corresponding to the further resource and in response to the alarm the system management function ~~(236)~~ adds the further resource to a list of one or more bottleneck resources.

11. (currently amended) The communication system ~~(200)~~ according to Claim 10, wherein the detection of the alarm includes at least one of the group of; an overload alarm, ~~and/or~~ the detection is performed over a time interval, ~~or~~ the detection is performed over a number of scheduling events, and ~~or~~ the detection is performed over a number of admission control events.

12. (currently amended) The communication system ~~(200)~~ according to ~~any of the preceding~~ Claims 1, wherein the system management function ~~(236)~~ resource receives a number of loading measurements on a number of the resources, and in response to the measurement(s) adds a ~~resource or a~~ percentage of a resource to, or removes a ~~resource or a~~ percentage of a resource from, a list of one or more bottleneck resources, ~~for example~~ when a loading exceeds or falls below a loading threshold over a particular time period.

13. (currently amended) The communication system ~~(200)~~ according to ~~any of the preceding~~ Claims 1, wherein the communication system ~~(200)~~ is a 3GPP wireless communication system ~~(200)~~ and the system management function is a radio network controller ~~(236)~~.

14. (currently amended) The communication system ~~(200)~~ according to Claim 13, wherein, the resources comprise at least one ~~or more~~ of the following:

- (i) A Radio network controller resource (105);
- (ii) A Node B hardware/software resource (110);
- (iii) An I<sub>ub</sub>/I<sub>ur</sub> backhaul resource (115); ~~or~~ and
- (iv) An air-interface resource (120).

15. (currently amended) A method of reducing processing power consumption in a system management function ~~(236)~~ in a communication system ~~(200)~~, wherein the method is characterised by comprising the steps of:

identifying a number of resources that affect data throughput in the communication system;

identifying one or more bottleneck resources from a subset of system resources; and

applying selectively one or more quality of service processes, ~~for example~~ selected from the group of scheduling ~~or~~ and admission control, to the identified one or more bottleneck resources, based on the identification of the bottleneck resource.

16. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to Claim 15, the method further ~~characterised by~~ comprising a step of:

identifying a resource capacity of a number of the resources to identify the bottleneck resource.

17. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to Claim 15 ~~or Claim 16~~, the method further ~~characterised by~~ comprising the step of:

prioritising the bottleneck resource, ~~and preferably other resources,~~ from the sub-set of system resources for selectively applying one or more quality of service processes.

18. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to ~~any of preceding Claims 15 to 17~~, the method further ~~characterised by~~ comprising the step of:

scheduling data packets for transmission, such that the data packets are added to, or removed from a data stream for transmission based on the bottleneck resource.

19. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to Claim 18, the method further ~~characterised by~~ comprising the step of:

performing per-cell checks on all resources that are not the bottleneck resource to identify whether further data packets are to be scheduled.

20. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to ~~any of preceding Claims 15 to 19~~, the method further ~~characterised by~~ comprising the step of:

counting a failure rate of admission attempts for a particular resource to identify the bottleneck resource.

21. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to ~~any of preceding Claims 15 to 20~~, the method further ~~characterised by~~ comprising the steps of:

detecting an alarm corresponding to a resource; and

adding, in response to the alarm, the resource to a list of one or more bottleneck resources.

22. (currently amended) The method of reducing processing power consumption in a system management function ~~(236)~~ according to ~~any of preceding Claims 15 to 21~~, the method further ~~characterised by~~ comprising the steps of:

receiving a number of loading measurements related to a number of the resources, and

adding, in response to said measurement(s), a resource to a list of one or more bottleneck resources ~~resource, for example~~ when a loading measurement exceeds a loading threshold over a particular time period; or

removing a resource from a list of one or more bottleneck resources ~~resource, for example~~ when a loading measurement falls below a loading threshold over a particular time period.

23-25. (canceled).

26. (currently amended) A radio network controller ~~(236)~~ managing base-site resources and system throughput of data, the radio network controller ~~(236)~~ identifying a number of resources, wherein the radio network controller ~~(236)~~ is ~~characterised by~~ comprises a throughput identification function to identify one or more bottleneck resources from a sub-set of the number of system resources involved in said system throughput.

27. (currently amended) The radio network controller ~~(236)~~ according to Claim 26, wherein the radio network controller ~~(236)~~ selectively applies one or more quality of service processes to the identified one or more bottleneck resources, for example where the one or more quality of service processes comprise: scheduling and/or admission control.

28. (currently amended) The radio network controller ~~(236)~~ according to Claim 26 ~~or Claim 27~~, wherein the throughput identification function identifies a bottleneck resource by detection of an alarm corresponding to the further resource, and in response to the alarm radio network controller ~~(236)~~ adds the further resource to a list of one or more bottleneck resources.

29. (currently amended) The radio network controller ~~(236)~~ according to Claim 28, wherein the detection of the alarm includes at least one of the group of; an overload alarm, and/or the detection is performed over a time interval, ~~or the~~ detection is performed over a number of scheduling events, and ~~or the detection is performed over a number of~~ admission control events.

30. (currently amended) The radio network controller ~~(236)~~ according to ~~any of preceding Claims 26 to 29~~, wherein the throughput identification function receives a number of loading measurements on a number of the resources, and in response to the measurement(s) the radio network controller ~~(236)~~ adds a ~~resource or a~~ percentage of a resource to, or removes a ~~resource or a~~ percentage of a resource from, a list of one or more bottleneck resources, ~~for example~~ when a loading exceeds or falls below a loading threshold over a particular time period.

31-32. (canceled).